

PROJECT DESCRIPTION

GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 85 (BUCKEYESTOWN PIKE)/EAST STREET AND MONOCACY BOULEVARD IN FREDERICK COUNTY, MARYLAND. MD 85 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 85/ EAST STREET APPROACHES OPERATING CONCURRENTLY AND THE MONOCACY BOULEVARD APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE LEFT-TURN PHASING IS PROVIDED FOR THE MD 85 AND EAST STREET APPROACHES AND FOR THE EASTBOUND AND WESTBOUND MONOCACY BOULEVARD APPROACHES.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS MD 85 AND EAST STREET AND PEDESTRIAN INDICATIONS ARE PROVIDED ACROSS BOTH LEGS OF MONOCACY BOULEVARD.

TYPICAL MESSAGES FOR ACCESSIBLE PED SIGNALS

MONOCACY BLVD (EAST APPROACH) AND BUCKEYESTOWN PIKE - INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS MONOCACY AT *EAST AND BUCKEYESTOWN*. *CROSSWALK ANGLES SLIGHTLY LEFT*." \*

WALK: RAPID TICK

BUCKEYESTOWN PIKE AND MONOCACY BLVD - INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS BUCKEYESTOWN AT MONOCACY. CROSSWALK ANGLES *SLIGHTLY RIGHT*." \*\*

WALK: RAPID TICK

MONOCACY BLVD (WEST APPROACH) AND BUCKEYESTOWN PIKE - INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS MONOCACY AT *EAST AND BUCKEYESTOWN*. *CROSSWALK ANGLES SLIGHTLY LEFT*." \*\*

WALK: RAPID TICK

EAST STREET AND MONOCACY BLVD - INTERSECTION WITH ANGLED CROSSING

WAIT: "WAIT TO CROSS EAST AT MONOCACY. CROSSWALK ANGLES *SLIGHTLY RIGHT*." \*\*

WALK: RAPID TICK

\* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPIDICULAR CROSSING IS \* 10'  
\*\* MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE ARE TO BE APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-4 CAMERAS), TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS WITH SYSTEM PACKAGE AND ASSOCIATED HARNESSSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.	QUANTITY	DESCRIPTION
900000	1 EACH	VIDEO INTERFACE EQUIPMENT: 1-4 CAMERAS
917017	1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
963010	2 EACH	FOUR-CHANNEL, TIME-DELAY-OUTPUT, LOOP DETECTOR AMPLIFIER
973023	128 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF : - 4 EACH D-3(1) SIGN (VARIABLE x 16 IN.) DUAL FACED - MAST ARM MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD 85, RIGHT ARROW" (24 IN. x 51 IN.) - POLE MOUNT - 1 EACH ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD 85, LEFT ARROW" (36 IN. x 75 IN.) - POLE MOUNT - 4 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS MONOCACY BOULEVARD" - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS BUCKEYESTOWN PIKE" - 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS EAST STREET" - 6 EACH R3-5L SIGN (30 x 36 IN.) - MAST ARM MOUNT

EQUIPMENT LIST "C"

NO EQUIPMENT TO BE REMOVED AND RETURNED TO SHA

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MR. JOHN CONCANNON  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
PHONE: (301) 624-8140/8141

MR. RAY JOHNSON  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
PHONE: (301) 624-8105/8106

MS. ANDREA ABEND  
DISTRICT UTILITY ENGINEER  
PHONE: (301) 624-8115/8116

MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATIONS DIVISION  
PHONE: (410) 787-7630

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
5035	1200 L.F.	12 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5036	190 L.F.	24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
8039	22 C.Y.	CONCRETE FOR SIGNAL FOUNDATION
8046	750 L.F.	NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8055	785 L.F.	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8056	700 L.F.	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8057	695 L.F.	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8059	4 EACH	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
8070	1 EACH	METERED SERVICE PEDESTAL
8074	75 L.F.	ELECTRICAL CABLE - 1 CONDUCTOR NO. 4 A.W.G - THHN/THWN
8077	23 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8084	128 S.F.	INSTALL OVERHEAD SIGN
8086	4 EACH	VIDEO DETECTION CAMERA
8087	2 EACH	CONTROL CABLE, 250 FT. VIDEO DETECTION CAMERA TO CONTROLLER
8088	2 EACH	CONTROL CABLE, 500 FT. VIDEO DETECTION CAMERA TO CONTROLLER
8091	6 EACH	10 FOOT BREAKAWAY PEDESTAL POLE
8094	3 EACH	STEEL POLE WITH A SINGLE 50 FT. MAST ARM
8097	1 EACH	STEEL POLE WITH A SINGLE 70 FT. MAST ARM
8101	1690 L.F.	12-PAIR COMMUNICATION CABLE, JELLYFILLED (UNDERGROUND)
8112	10 EACH	GROUND ROD - 3/4 INCH DIAMETER x 10 FOOT LENGTH
8128	57 EACH	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8133	1600 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G)
8134	1725 L.F.	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G)
8135	2960 L.F.	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G)
8136	870 L.F.	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G) TC
8140	4 EACH	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
8143	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
(NEW)	8 EACH	16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
(NEW)	1 EACH	2-WIRE CENTRAL CONTROL UNIT
(NEW)	8 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION
(NEW)	8 EACH	NONINVASIVE DETECTOR, 1000 FOOT LEAD-IN CABLE

PHASE CHART

	1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
PHASE 1 + 5	←G	←G	←G	R	R	←G	R	←G	R	R	←R	←R	R	R	←R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 + 5 CHANGE	PHASE 1 + 5 MAY CHANGE TO PHASE 1 + 6, PHASE 2 + 5 OR PHASE 2 + 6																										
PHASE 1 + 6	←G	←G	←G	G	G	←R	R	←R	R	R	←R	←R	R	R	←R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
1 + 6 CHANGE	←Y	←Y	←Y	G	G	←R	R	←R	R	R	←R	←R	R	R	←R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 2 + 5	←R	←R	←R	R	R	←G	G	←G	G	G	←R	←R	R	R	←R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
2 + 5 CHANGE	←R	←R	←R	R	R	←Y	G	←Y	G	G	←R	←R	R	R	←R	←R	←R	R	R	WK	WK	DW	DW	DW	DW	DW	DW
PHASE 2 + 6	←R	←R	←R	G	G	←R	G	←R	G	G	←R	←R	R	R	←R	←R	←R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEARANCE	←R	←R	←R	G	G	←R	G	←R	G	G	←R	←R	R	R	←R	←R	←R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 + 6 CHANGE	←R	←R	←R	Y	Y	←R	Y	←R	Y	Y	←R	←R	R	R	←R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 3 + 7	←R	←R	←R	R	R	←R	R	←R	R	R	←G	←G	R	R	←G	←G	←G	R	R	DW	DW	DW	DW	DW	DW	DW	DW
3 + 7 CHANGE	PHASE 3 + 7 MAY CHANGE TO PHASE 3 + 8, PHASE 4 + 7 OR PHASE 4 + 8																										
PHASE 3 + 8	←R	←R	←R	R	R	←R	R	←R	R	R	←R	←R	R	R	←G	←G	←G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
3 + 8 CHANGE	←R	←R	←R	R	R	←R	R	←R	R	R	←R	←R	R	R	←Y	←Y	←Y	G	G	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 7	←R	←R	←R	R	R	←R	R	←R	R	R	←G	←G	G	G	←R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
4 + 7 CHANGE	←R	←R	←R	R	R	←R	R	←R	R	R	←Y	←Y	G	G	←R	←R	←R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8	←R	←R	←R	R	R	←R	R	←R	R	R	←R	←R	G	G	←R	←R	←R	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 + 8 CHANGE	←R	←R	←R	R	R	←R	R	←R	R	R	←R	←R	Y	Y	←R	←R	←R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 + 8 ALT	←R	←R	←R	R	R	←R	R	←R	R	R	←R	←R	G	G	←R	←R	←R	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEARANCE	←R	←R	←R	R	R	←R	R	←R	R	R	←R	←R	G	G	←R	←R	←R	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 + 8 ALT CHANGE	←R	←R	←R	R	R	←R	R	←R	R	R	←R	←R	Y	Y	←R	←R	←R	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	←FL/R	←FL/R	←FL/R	FL/Y	FL/Y	←FL/R	FL/Y	←FL/R	FL/Y	FL/Y	←FL/R	←FL/R	FL/R	FL/R	←FL/R	←FL/R	←FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

REDLINE REVISION NO. 8  
NEW TRAFFIC SIGNAL  
SHEET ADDED 09/ /2008

SHA

STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 85/EAST STREET AND MONOCACY BLVD.  
FREDERICK, MD

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE 5/19/2008 CONTRACT NO. FR4265172

DESIGNED BY S. BLOSS COUNTY FREDERICK

DRAWN BY S. BLOSS LOGMILE 06008510.68

CHECKED BY N. LEARY TMS NO. G813

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BY: \$USER\$